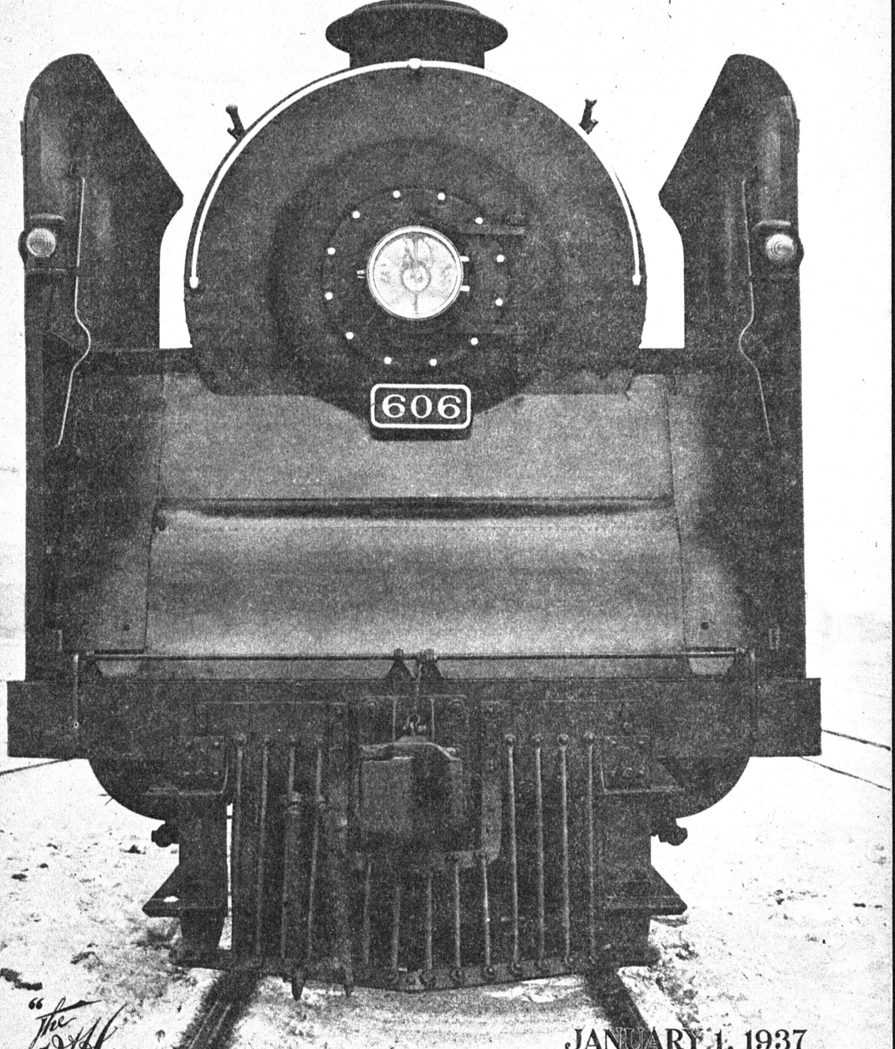
THE DELAWARE AND HUDSON RAILROAD BULLETIN



"The D&H"

JANUARY 1, 1937

New Year

THE wintry stars shine cold and chill,
The lanterns light a frosty street,
Beyond a mullioned window's warmth
The steep-pitched roofs glint white with sleet.

Within, the fire glows and roars—
Great shadows leap upon the walls—
On cheerful faces, sparkling eyes
The warm-hued light flares up and falls.

A deep-toned song rings to the roof—
Then hushes quickly as the bell
Tolls twelve broad strokes—
New Year! All's well!

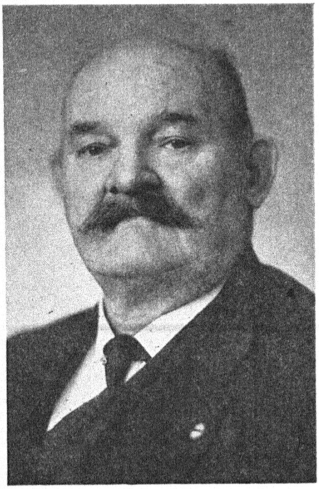
A year has died, a year is born,
Another leaf lies blank and bare,
Within each heart there grows the thought,
To write high deeds and purpose there.

ANON.

The
DELAWARE AND HUDSON RAILROAD
CORPORATION
BULLETIN

Half Century In Train Service

Retired Baggageman Reviews 51 Years With Delaware and Hudson



JOSEPH J. NERLING

THE heaviest train crew on the Delaware and Hudson, if not in the world, at the turn of the century, operated the Delanson-Schenectady accommodation train, according to JOSEPH J. NERLING, retired Susquehanna Division baggageman, who was one of the three. Conductor Charles Saxton weighed 272 pounds; MR. NERLING, baggageman, scaled 278; while the trainman, John Redmond, tipped the beam at 328, making a total of 878 pounds for the trio, or an average of 293 each. Redmond was so big that he could not get between the cars to make a coupling and even if the "clearance" had been greater he would not have been able to bend over far enough to reach the dangling air hose. As a result the two "lighter" members of the crew had to couple the cars when necessary.

Before beginning his 51-year railroading career MR. NERLING sampled a variety of jobs. Born in Schenectady, February 18, 1863, JOSEPH left school at the age of thirteen to go to work on a broom corn and tobacco farm at South Schenectady. The broom corn was sold to one of the many Schenectady broom factories; the tobacco was shipped to cigar-makers in various cities. After two years on the farm, he returned to Schenectady to work in the shawl factory on Washington Avenue where wool cloth and shawls were woven, it being his duty to feed the raw wool to ten machines in the carding room. Three years later he went to work in Holloway's Foundry, "cutting" sand for the molders. Behind each molder was a pile of sand used in making the molds for stove parts, iron pots, and teakettles. At night fresh sand had to be piled up to replace that used during the day, each pile being "cut" or loosened with a shovel so that it would be in the proper condition for use the next morning. MR. NERLING and his partner had to "cut" the sand for thirteen molders.

On August 1, 1883, MR. NERLING was hired by Conductor William Gilbert to flag the work train being used in the construction of the four-track A. & S. yard south of the Mohawk roundhouse. The dirt removed from the yard site was used to double-track the main line from the Mohawk River to Glenville Bridge. Later on they built an eight-track yard north of the roundhouse. From there they went to Saratoga, in 1884, to double-track the main line from Milkman's Crossing to High Street to relieve traffic congestion.

Rock-filled canal boats formed the foundation of the right of way in places north of Whitehall MR. NERLING learned when the work train was sent up there to place fills. Old canal boats had been towed to the projected right of way across the bays and inlets along the southwestern shore of Lake Champlain when the road was built. They were filled with rocks, sunk, and covered over to form a base for the tracks. Eventually the boats collapsed in the middle, permitting the bows and sterns to heave upward, resulting in a rough roadbed. The work train was sent north to restore the line to the proper grade.

In 1885 MR. NERLING was transferred to Patrick Carey's gang of stone masons who were then installing a turntable near the Schenectady freight house. Prior to that time engines arriving on passenger trains from Delanson and Saratoga had to make the four-mile round trip from the station to the roundhouse to turn around; by installing an extra turntable this distance was cut to a few city blocks.

When this task was done the gang was sent to Waterford to repair the wall on the drawbridge across the canal. This long span was then manually operated; the tender turned a long crank which actuated a series of gears to open or close the draw.

Returning to Schenectady on July 3, 1885, MR. NERLING was hired as extra trainman by James Brownell, agent and yardmaster, to fill in on the crews running from Schenectady to Port Henry, Rutland, Whitehall, Delanson, and Oneonta, as well as Delanson pusher locomotives.

For 45 years beginning in 1886 he was the baggageman on the combination freight and passenger train operating between Schenectady, Delanson, Mechanicville, Troy and Saratoga. At first they ran between Delanson and Schenectady only, making three round trips daily. In 1902 the run was extended to Mechanicville with a regular passenger train; ten years later they ran on in to Troy; then, during the World War period, they went north to Saratoga. Under the latter arrangement they left Delanson in the morning, running to Troy via Mechanicville and back to Delanson. On the next trip they went from Delanson to Saratoga and return to Schenectady. In the afternoon they ran from Schenectady to Troy, then back to Delanson, a total of 203 miles per day.

In 1906 MR. NERLING had a remarkable escape from death when his train, northbound with engine 369, a baggage car, and one coach, traveling at 55 miles an hour, collided head-on with a work train in Campbell's Cut, south of the General Electric plant. The work train riding coach, which had been in front of the engine, was completely demolished. MR. NERLING was in the baggage car when the collision occurred and he saw their tender come right back through the front end of the car, coming to rest inside the baggage compartment as neatly as if it had been set there with a crane. Despite the fact that the coach and baggage car telescoped into the length of one car he miraculously escaped serious injury.

One of the most amusing incidents in all his half century of railroading occurred many years ago when a four-wheel "Jimmy" car loaded with coal completely disappeared from their train en route from Delanson to Mechanicville. When the yard clerk at Mechanicville inspected the train he found one car missing, while a check with Delanson showed that it had left that point in MR. NERLING'S train. Several days later the mystery was solved; the car was found at the foot of an embankment near the Normanskill trestle, near Kellys. The crew then recalled that on the night the car "disappeared" they had stopped there to couple up their train which had broken in two. Apparently this one car had jumped the track and rolled down the bank without anyone noticing it when the train was coupled up again.

MR. NERLING well recalls the world's first gas-electric rail car, operated experimentally by the Delaware and Hudson in 1906. After the initial trials "The 1000" was placed in regular service between Troy and Lake George but considerable difficulty was experienced in winter when the low-hanging motors were "hung up" on crossing planks and a steam engine had to be dispatched to push the car free. Later it was used to replace MR. NERLING'S train. Eventually it was removed from service and stored at Delanson. About one and a half years afterward a southern road bought it after conducting a series of tests on one of which it covered the 55 miles between Delanson and Oneonta in 55 minutes.

MR. NERLING continued as baggageman on the Schenectady Branch passenger train until that service was discontinued. He then became baggageman on main line passenger trains 306 and 311, changing to 302 and 305 when the first two were abolished.

MR. NERLING is a member of The Delaware and Hudson Veterans' Association and the Red Men. He and Mrs. Nerling, who live at 1421 Albany Street, Schenectady, have one son, Joseph, Jr., also of Schenectady.

Competition

Guide: **"This, ladies and gentlemen, is the greatest cataract in the country, and if the ladies will only be silent for a moment you can hear the deafening roar of the waters."**

Light-weight, Welded Steel Car Built by Oneonta Shop Force

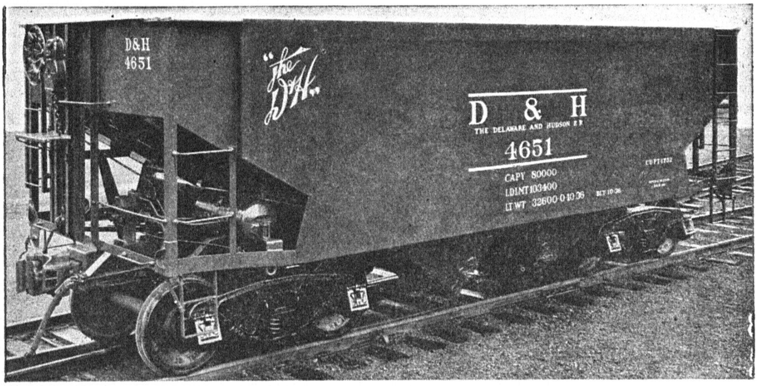
KEEPING pace with the development of new passenger equipment and motive power, though not as highly publicized, the freight car has also been passing through a process of refinement the results of which are far more important than the spectacular performances of streamlined trains or the air-conditioning of passenger equipment. When it is realized that for every passenger car the railroads operate 44 freight cars the importance of any improvement in the design of the latter is apparent.

Decreasing the weight of freight equipment to enable our trains to carry a higher pay load in proportion to their gross weight has been the aim of the Delaware and Hudson in the design and construction of a new, all-steel, self- clearing hopper car of 40-tons nominal capacity, which was completed at Oneonta Shops on October 30. Actually carrying over 50 tons, the car is rated at 40 tons merely because under the rules of the American Association of Railroads cars with 5" x 9" axles are limited to this amount, 5½" x 10" axles being required under 50-ton cars because of the dead weight involved in the former conventional designs.

The new car meets all A. A. R. interchange requirements but weighs much less than the usual type, due to the use of alloy steels in both the underframe and parts of the superstructure. The light weight is 32,600 pounds and the cubical capacity 1,752 cubic feet. Since, under Rule 86 of the A. A. R. Code, a total weight on rails of 136,000 pounds is allowed for a car with 5" x 9" axles, a maximum load of 103,400 pounds is permitted, or a ratio of pay load to dead weight of 3.17 to 1. The car is capable of carrying 103,000 pounds of anthracite, figuring an average of 52 pounds per cubic foot and the usual heap load.

In addition to the use of alloy steels, weight reduction is accomplished by welded construction which eliminates most of the riveting, the car now having a total of only 277 rivets as against 2,576 in a 50-ton steel hopper car of conventional design. A reduction in the number of parts used in the car has also been effected, there being 1,153 pieces, compared with the 3,596 formerly used.

A further reduction in weight is possible through the use of alloy steel in the trucks and certain structural parts such as door frames, doors, and the combination front and back stops.



Light but strong—alloy steels and welded joints

The A. A. R. "Z"-section center sills are of Manten steel joined by a continuous weld at the junction of the two top flanges. The body bolster parts, cross bearers, and floor stiffeners are also of Manten, joined by electric welding. Slope and hopper sheets are of Corten and Yoloy steels, high tensile strength, corrosion resisting alloys, while the side sheets are of ordinary open hearth steel, experience having shown that the side sheets of all-steel hopper cars require renewing after a period of 17 years, whereas slope and hopper sheets have a service life of but 12. The use of alloys in the latter should help to duplicate the achievement of the builder of the famous "one horse shay," no part of which failed first. With this idea in mind, the hopper unit is strengthened by the use of doors and frames of cast steel.

From a car maintenance standpoint the ideal condition is to renew all these parts at one shopping, hence the welding together of such sheets and shapes offers no obstacle to efficient maintenance to offset its obvious advantages.

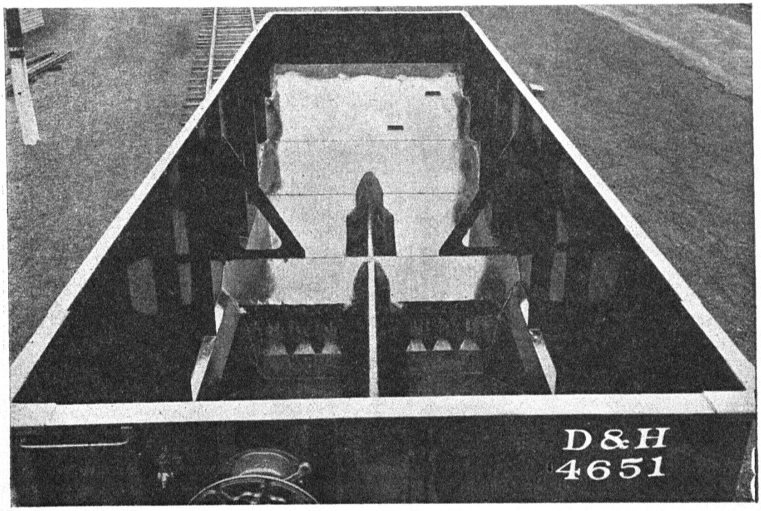
Power hand brakes and "AB"- type air brake equipment, the latest development for freight service, have been applied to the car, the performance of which in service is being watched with keen interest.

Smoke Lifters

DELAWARE and Hudson passenger locomotives like the 606, pictured on the front cover of this issue, now carry a smoke-lifting device consisting of an inclined sheet of steel rising from the pilot beam to the smoke-box at the level of the running-boards, and two vertical plates curved in at the top which roughly parallel the sides of the smoke-box, being slightly closer at the rear. The currents of air swept up past the sides of the boiler through the passages thus provided deflect the steam and smoke from the stack so that they no longer sweep down around the cab to obstruct the vision of the crew. The device is peculiar to Delaware and Hudson locomotives in this country, though in general use in Europe. It is said to require about 100 horsepower to overcome the air resistance created by the device when traveling at 100 miles per hour, which is not a matter of major importance in most cases since this speed is not commonly attained and the resistance decreases very rapidly at lesser rates of speed.

Antique

Waiter: "Wasn't your egg cooked long enough?"
Customer: "Yes, but not soon enough."



Self-clearing construction features the interior

Steel and Men

The Inner Workings of Our Country's Railroads

BIG employers are the railroads in prosperous times, and big spenders when they have income to spend. They give work in a fine year to close to two million people in their own household. They are good customers of the basic industries. They buy a fifth of the country's production of timber, fuel oil, and iron, and steel, and a fourth of the bituminous coal. Minor items on their annual bill just now are fourteen million dollars for lubrication, thirteen for paint, eleven for stationery.

To see them whole and comprehend their significance in the national scheme of things, a stratospheric point of view midway between the oceans would be helpful and, with imagination, can perhaps be arranged. From such a point above, say, St. Louis, look down and contemplate the railroads.

They show themselves as a net of steel covering the country from coast to coast, apparently, perhaps actually, holding the country together. The steel lacework, with meshes small and fine east of the Rockies and wider beyond, contains a quarter-million miles of railway line, almost a third of the world's total. Add yard tracks and sidings, and the mileage is almost a half million.

The observer sees that ten heavy strands support the whole fabric. They are the ten major railroad routes. All of the 900 operating railroads of the country are tributary to them. The heaviest is the trunk route joining the North Atlantic seaboard with Illinois. From Boston, New York, Philadelphia, Baltimore, and Norfolk its lines start for the West.

Other major routes run from New York to Atlanta, from Atlanta to Chicago, from Illinois to the lower Mississippi Valley, from Illinois into the Northern grain states, and from Missouri southwest to the Gulf. Three parallel routes, the transcontinentals, cross from the Mississippi to the Pacific. A tenth route links the West Coast states. These ten routes are the frame of the railroad structure of the land.

There is movement along every thread of the steel net: thousands of trains in motion at once; passenger trains, express trains, mail trains, work trains, fast freights, and slow freights; the twinkle of a million signal lights; the smoke of 50,000 steam locomotives. Those iron horses alone, linked together, would make a cavalcade reaching from New York to Cleveland.

The passenger trains run a million miles a day, and 49,000 of us get aboard them in an average hour to swell the annual passenger-mile total to sixteen billions. Two million freight cars are in service down there, loading at the rate of 3,300 an hour in dull times. In a year they carry a billion and a quarter revenue tons of cargo. In a year their trains travel 393,000,000 miles. Freight worth a billion and a half to its owners is daily in transit by rail.

Mass transportation, the gift of the railroads to civilization, is best seen on the lines that follow the ten major routes. Through these main channels vast commodity currents move continually or seasonally about the land.

Tides of potatoes from Maine, Wisconsin, Idaho, Florida; tides of sugar from the seaports, tides of hogs from the corn states. A seldom interrupted tide of beef cattle sweeps from the Southwestern ranges through the fattening pens of the Middle West to the packing centers, proceeding thence as food to the consuming markets, with side streams of leather to the shoemaking regions.

There are distinct flows of grain, wool, and cotton; of yellow pine and Douglas fir; of citrus fruits, apples, strawberries, tomatoes. Tidal waves of the raw products of soil and forest and mine surge toward the industrial East, then recede, transformed into manufactures. These major flows of traffic feed smaller ones that trickle steadily to every corner of the country.

It all plays a part in making us the kind of nation we are. When distances and natural barriers might have made the United States another Europe, economically and perhaps politically; when to move wheat from Buffalo to New York cost three times the value of the wheat at Buffalo, and tedious canals were the only hope, the railroads came along.

They whistled at distance. They pushed aside potential frontiers with their cowcatchers. Tamed and disciplined, they gave the country cheap interchange, though we howl perennially about the rates. Out of provinces as far apart, mentally, morally, and geographically, as New England and California; out of a wheat empire here, a cotton realm there, a coal-and-iron domain yonder, they helped to create a united community, the biggest cooperative experiment and the finest specimen of nation the world has yet exhibited.

From our observation point you can see the mass transportation of the railroads making existence possible for the great cities—a dubious blessing perhaps, but there the cities are, and they must be supplied and sustained, hence those endless miles of trains converging toward them.

From the stratosphere, the titanic transportation mechanism of the nation seems to be running itself: a soulless thing of tracks, cars, locomotives, steam and electricity, a machine that got going somehow and keeps on automatically. But a railroad, first and last, is human nature and human effort; the cars and things are mere accessories.

It is a cross-section of all labor. Carpenters and cooks, doctors and lawyers, printers and painters, seamstresses, laundresses, chemists, sailors, actuaries, icemen—the railroad enlists most of the callings and makes them into one of the furthest-flung yet closest-knit and more responsive of industrial organizations.

They are an army, deployed over the land, scattered perhaps a thousand miles from headquarters, ruled with army discipline. The remotest and humblest unit is proudly responsible for "the road," and is held to its responsibility by an endless chain of supervision that keeps it in instant touch with the top and keeps the road going as one organism.

Like an army the railroad has its general staff—directors, presidents, vice-presidents—and its field officers. It has its engineering corps to plan and build, its traffic cavalry to scout for business, its commissary to handle purchases and supplies, and its infantry to perform what infantrymen like to call "the real work," the actual operation of the machine. In charge of these departments are line officers of major general rank—vice-presidents again.

Consider only the "infantry," the department of operations, commanded by Vice-President Doe. In it are brigades led by the assistant general manager, the chief personnel officer, the chief engineer, and the chiefs of passenger transportation, freight transportation, and motive power, brigadier generals all, and all vital in the working of the road.

But take only General Manager Jone's brigade, with its regiments headed by the superintendents of transportation and of motive power, the engineer of maintenance of way, the superintendent of signals, and the division superintendents. Then focus the eye on just one of these colonels of the railroad army, Superintendent Smith. If any one man can be said to run the railroad, in a sense that the public sees it in physical operation, that man is Superintendent Smith, who puts into effect the orders of General Manager Jones.

A fifty-mile, four-track division. A train for almost every mile. Expresses booming along full speed. Locals seizing precious minutes for use of the main line. Way freights at town sidings, dropping loaded cars, picking up empties. Mile-long strings of coal gondolas trundling down from the mines. Trains of refrigerator cars, trains of general merchandise making the time of passenger trains.

Rush and hustle, and every rushing, hustling thing held to its proper place by electric eyes that watch and warn, by vigilant men in lonely signal towers, and by men at headquarters miles away, the train dispatchers, who see the whole division as a panorama of creeping lights on the observation board before them and, with telephones strapped to chests, talk to the far off signal towers, controlling every movement.

Leagues of freight yards in outlandish parts. Warehouses and grain elevators, huge, unlovely, indispensable. Fleets of tug boats, barges, car floats, ferryboats. A terminal that in a certain hour of the day sends away sixty passenger trains. Hidden yards where those trains are made up; where coaches, Pullmans, and diners are swept, washed, garnished, and stocked for their travels—there's a lot of housekeeping on the railroad.

Yard engines pushing the new trains to their appointed places at the appointed moment, assisted by switch towers that usher them through mazes of rails to their tracks. Roundhouses where smoky, steamy monsters are groomed and conditioned to take the trains away. Car shops that will give you a new wheel, truck, or a new drawbar while you wait.

Out along the line the maintenance men, keeping up the way against the wear of the traffic and the

weather. Wire crews tuning up the signal mechanism, the nerve system of the road. Supervisors dodging about in track motor cars. Track walkers tapping rails with inquiring hammers. Section bosses with flags, gauges, and levels. Section gangs tamping ballast, mending culverts, grade crossings, cattle guards, and fences, mowing weeds and combating rain wash in summer, fighting frost heave, snowdrifts, and rock slides in winter.

Vigorous action all over the division, and the superintendent, under the general manager, coordinating all. Under him march the captains: the division engineer, the general foremen, the master mechanics; the terminal master, the train dispatchers, the master of marine and the train master or the trainmovement bureau in charge of the goings and the schedules of trains.

Then the non-coms: the conductors and the engineers who take out the trains; the station agents selling tickets, the telegraph operators at their keys. Last, the high privates: brakemen, firemen, mechanics, oilers, wipers, cleaners, baggagemen, bridge tenders, crossing flagmen, and the rest, not forgetting the switchmen in the sooty yards—weird figures they are on a snowy night, thawing frozen switches with their flame throwers.

Like Strickland Gillilan's immortal section boss who wired, "Off agin, on agin, gone agin, Finnigin," they are responsible, directly or otherwise, to the superintendent. Who makes the timetables? Who orders the special train for Ambassador Nibbs? Who cares so greatly for No. 444 to be on time—that No. 444 hasn't been late since the blizzard of 1930? Ask the general manager, who will probably refer you to his superintendent. All who have to do with track or trains belong to the general manager's brigade—and they are only half of the operation department alone of the human army that runs one railroad.

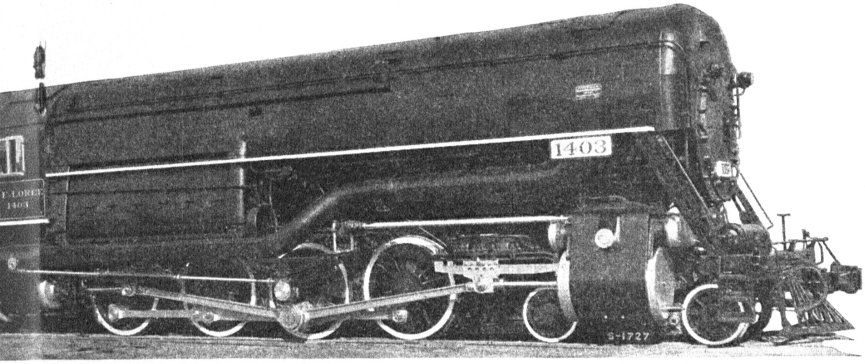
The owners themselves are a multitude. One road's stockholders number 190,000. Seven leading roads count 600,000 of them. The bondholders are as the sands of the sea. Lots of people with savings accounts and life insurance are in railroading without, perhaps, guessing it. Deeply rooted are the railroads in the national community they have helped to create.

Railroading has lost 60,000 workers since 1929, its passengers are barely a third as numerous as then, and its freight is scarcely half as heavy. One looks almost in vain for the construction crews that in the 1920's were busy making the lines over, building mighty bridges, mammoth tunnels, valley-leaping viaducts and moving mountains to straighten curves and grades.

It is not the depression entirely. Beside the network of steel a concrete network grows. Upon the new public highway roll 20,000,000 passenger cars, private and public, and 3,000,000 motor trucks, and above them airplanes flash. This is a free country, and that's where some of the business of the railroads has gone.

The airplanes carry little more than a tenth of one per cent of the number of the passengers the railroads carry. The buses are not formidable; much of their traffic they create for themselves or inherit from vanished interurban electric lines. But

(Continued on page 11)



The
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BULLETIN

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Be sure to find a place for intellectual and cultural interests outside your daily occupation. It is necessary that you do so if this business of living is not to turn to dust in your mouth. Moreover, do not overlook the claims of religion as the explanation of an otherwise unintelligible world. It is not the fast tempo of life that kills but the boredom, a lack of strong interest and failure to grow that destroy. It is the feeling that nothing is worthwhile that makes men ill and unhappy.

—DR. HAROLD WILLIS DODDS.

Vital to You

TWO bills of extreme importance to railroaders will come before the January session of Congress: The Water Carrier Regulation Bill and The Long and Short Haul Clause Bill, known in the last session as the Pettengill Bill.

The first provides that waterway carriers be regulated as to rates and practices, thus protecting the railroads against unfair competition and the shippers against discrimination which is against the best interests of business generally. This bill had the support of the railroads, organized labor, the Coordinator of Transportation and the Interstate Commerce Commission during the last session, but was defeated by certain interests.

The Pettengill bill, passed by the House of Representatives by a large majority, Congress adjourning before it could be passed by the Senate, provides for the repeal of the clause which now prevents rate adjustments between certain competitive points without destroying the present rate structure covering intervening non-competitive points. Highway and water carriers are not hampered by such restrictions and its repeal is asked in order to allow the railroads to compete for such business on an even footing. Organized labor favors this legislation because it is considered to be in the interest of the employees.

The passage of the measures should have a favorable effect on railroad employment, and an even more far-reaching effect on railroad purchases of equipment and supplies, which would benefit the entire nation.

Organizations and individuals interested in the welfare of the railroads should urge representatives in Congress to consider these bills in the light of the above facts.

New Motive Power

LAST month a great assembly of engineers acclaimed the announcement of the completion of a new design of boiler, or rather an automatic steam generator, to be used in a turbine-powered, electric locomotive, as heralding a new era in the transportation industry. Generating steam at a pressure of 1,500 pounds per square inch, the boiler has no safety valve of the ordinary pressure relief variety. Its operation is controlled by at least four safeguards against failure of the water supply, excessive temperature, failure of the oil flame, etc.

If we turn back the pages of motive-power history but a year or two we find the same predictions made with regard to the effect of the use of Diesel engine power on the railroads. Indeed, many such units are now in successful operation.

Yet, at a later session of this same body of engineers, one who has had long experience with the design and construction of steam locomotives *and* streamlined Diesel trains, stated that, despite the obvious advantages of the several kinds of new motive power, three things must be considered before the comparative value can be determined: first cost, maintenance cost and fuel cost. The last was estimated at about 20 per cent of the total. It is generally admitted that maintenance of the steam locomotive over a period of years will be less than for the newer types of power, for which actual figures have not as yet been developed. Regardless of this, the first cost of a steam locomotive of conventional design is about $30 per horsepower, compared with $100 for its competitors.

Admitting the value of Diesel and electric locomotives for certain special types of service, it was the concensus of opinion that the greatest advances will be made in the future by refinements of the present design of the steam locomotive, such as the condensation of the exhaust steam to avoid carrying up to 20,000 gallons of water in a tender, rather than through any of its competitors to date.

Rail vs. Water Transport

COLD weather arriving the first week of December, as it has a way of doing, put a sudden stop to operations on the barge canals of New York State, leaving over 300 vessels, tugs, barges and motorships, scattered throughout its length. The cargoes thus stranded are variously estimated at from 5 to 10 millions of dollars in value, the interest on which from now until spring runs up into sizeable figures even at present low rates. In addition, many of the crafts are in portions of canalized streams that swell to dangerous proportions with the coming of the spring rains, so that the presence of the boats is a menace to not only their own safety but that of the locks, railroad and highway bridges spanning the canals, as well as small craft normally drawn up for the winter along these water courses.

What better answer could there be to the advocates of bigger and better waterways than their failure to function during 5 to 6 months of the year? If a better one is needed, it is furnished by an analysis made by the Illinois Central System, covering 715 carloads interchanged with the Mississippi Valley Barge Line, which shows that the expense of a joint water-and-rail movement totaled $190.71 a carload whereas the railroad would have moved the freight the entire distance for $96.09 per car. Thus the waterway cost only 102% more than the rail route which is open to traffic 365 days in the year, with rare exceptions.

Ripening Time

AS a man grows riper he reads more of the Book of Experience and less of the Pages of Prophesy.

He thinks more about the worth of folks and less about collateral.

He boasts less, boosts more.

He observes that snobbery is a confession of inferiority, and kindly politeness the trade mark of the only aristocracy worth mentioning.

He relishes an argument less, and notes that the streaks of criticism can be washed away with the suds of tolerance.

He hurries less, and usually accomplishes more.

And he comes to know that the best trophy any man can win is the love and understanding of those who need him.—*Author Unknown.*

Steel and Men

(Continued from page 9)

in the private automobiles go millions of tons of freight. Last year the railroads saw a billion dollars in gross revenue from possible business slip away from them, chiefly to the trucks. The railroads still have the bulk, the skim milk of the freight pitcher, but the trucks have the cream.

There have been lay-offs, high and low; there are vacant desks in the offices, empty posts in the yards. Still the workers are legion, for railroad economies can go only so far. The way, the equipment must be maintained, and travel made as safe and sure for lean traffic as for fat. You can't close down a railroad and go off to the Riviera, pending prosperity's return.

The railroad of tomorrow? The roads will change to meet the new conditions and the new technological advances, just as they have been changing ever since stones served for ties and the only headlight was a bonfire on a flat car, pushed ahead of the engine.

In their next stage of evolution, by present signs, their trains of all sorts will be time-savers. Powerful electric locomotives already bring Washington within three and one-half hours of New York. Thirty-six hours, Chicago to Los Angeles, is promised. A new kind of passenger train has appeared that comes close to flying. Diesel-engined and streamlined, one of these trains—three cars and a power plant—weighs little more than a Pullman car, and does two miles a minute with ease to itself and its passengers. Such trains are in actual service, and others are being made.

Through freights of the future will run on swift schedules. Many such trains are now making the time of passenger trains. Overnight service, Buffalo to New York, and third-morning delivery, New York to Chicago, are typical recent innovations to serve the needs of the business public in a period of low inventories and rapid turnover of goods and capital. Electrification of freight roads is here. High-pressure, triple-expansion steam locomotives are increasing; besides them older locomotives look like toys. Freight cars bigger, lighter, and stronger than any in the past are rolling out of the shops. Speed has come into freight hauling and will presumably stay, for railroad improvements once made are expected ever after.

The railroad of the future may be authorized to use bus, truck, plane, and cargo boat as extensions of its train business. This move on the freight side will be in response to the demand of shippers for "completed service," rendered by one responsible agency. In that happy day the railroad will be enabled to coordinate all means of transport necessary to send a consignment from anywhere to anywhere else in the land.

Of old the city merchant received a postcard from the railroad, saying in effect, "We have a consignment of freight for you. What do you want done with it?" Now many roads are trying store-door delivery and collection; sometimes providing sealed containers and detachable truck bodies for less-than-carload lots. It saves wasted days for the merchant.

There are signs no end that the railroads are still "evoluting," preparing for a new and busy chapter of their lively story. They ask just now for consideration of their grievance against a new competition, on public highways and waterways and in the air, which their taxes, paid at the rate of $28,900 an hour, help to support. They admit the usefulness of trucks, boats, planes, but feel that all forms of interstate transport should be regulated equally by one federal transportation authority, and the government seems disposed to think likewise.

Whatever political things are done, whatever stabilizing moves are taken—be they along the line of consolidations, as in the past, or of nationalization, the railroads will keep on as long as any of us remain to watch the cars go by. The mass-transportation task, without which the country would languish, will still be up to the railroads. —*N. Y. Times Magazine.*

Prescribed

"And why is Ben wearing the big plaid vest?"

"Haven't you heard? The doctor told him to keep a check on his stomach."

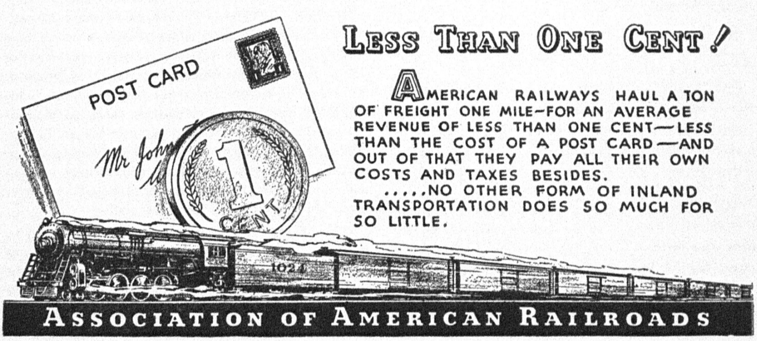
Oranges and the Railroads

ALMOST as closely associated with our holiday season as the turkey are the oranges which help to add color to the festive board from Thanksgiving through the Christmas and New Year festivities. Yet how few stop to think of the important part the railroads play in providing this delicacy which has become a common item of our daily diet.

Roughly one-third of our oranges are grown in Florida while nearly two-thirds of the oranges and 95 per cent of all the lemons consumed in the United States and Canada come from California. Also in the citrus family is the grapefruit, another good patron of the railroads, 71 per cent coming from Florida and the balance from Arizona and California.

Although the Mission Fathers brought orange trees to California from Spain as far back as 1789, the Portugese having introduced them there from China, the fruit was not marketed though the soil and climate favored its cultivation. In 1873, two navel orange trees were set out in Riverside, Cal., by a Mrs. Eliza Tibbetts, now called the Mother of the California Citrus Industry. One of the trees still stands, surrounded by an iron fence as a protection against souvenir hunters.

It was the introduction of this seedless variety, through the efforts of the United States Department of Agriculture, that gave the present orange groves their start, although another variety, the Valencia, which has a few seeds, is grown along the coast. This ripens in summer while, due to the intense heat of the interior valleys where the navels are grown, they are picked and shipped from November



LESS THAN ONE CENT!

AMERICAN RAILWAYS HAUL A TON OF FREIGHT ONE MILE—FOR AN AVERAGE REVENUE OF LESS THAN ONE CENT—LESS THAN THE COST OF A POST CARD—AND OUT OF THAT THEY PAY ALL THEIR OWN COSTS AND TAXES BESIDES.

.....NO OTHER FORM OF INLAND TRANSPORTATION DOES SO MUCH FOR SO LITTLE.

ASSOCIATION OF AMERICAN RAILROADS

to May, which accounts for their popularity during the winter holiday season.

Only with the construction of rail facilities in the citrus region did the business grow to any considerable proportions. Now it is concentrated to such an extent that 85 per cent of California's oranges and 97 per cent of its lemons are grown in the region from Santa Barbara to the Mexican border, or about 100 miles.

Despite the greatest care in icing and rushing shipments to market heavy losses were incurred in transit until investigations showed that much of the damage was the result of injury in picking and handling. The slightest scratch on the skin of the fruit may result in spoilage before it reaches the consumer. Consequently pickers, sorters and packers all wear gloves to prevent fingernail scratches.

At the packing houses the oranges are given a bath in soap powder, passed between soft scrubbing brushes and through a cold rinsing shower. After being dried by blowers they receive a thin coating of wax for polish and protection before passing to the grading tables and sizing machines. Stamping, wrapping in tissue paper and packing make the fruit ready for loading into the refrigerator cars which carry it to the 48 states as well as to Canada, Mexico and to ships bound for foreign ports.

Some idea of the importance of the railroads to the citrus industry may be obtained from a comparison of carloads shipped from California in 1886-87, which totaled 2,212, and the 108,616 moved in 1934-35, though this last includes some water and truck shipments. When it is realized that this citrus region obtained its first rail connection with the East with the construction of the Southern Pacific in 1876 and that the Sunset Route, providing a second connection, was completed in 1883, the relation of your orange to the railroad is definitely established, a similar condition existing in the case of the Florida fruit.

How Wars Begin

A youngster asked his father how wars began. "Well," said his father, "suppose America quarreled with England, and—" "But," interrupted the mother, "America must not quarrel with England." "I know," he answered, "but I am taking a hypothetical instance." "You are misleading the child," said the mother. "No I am not," he answered. "Yes, you are." "I tell you I am not! It's outrageous—." "All right, Dad," said the boy. "Don't get excited. I think I know how wars begin."

Our Postal System

AMONG the things which we Americans take for granted, and would be helpless without, is our postal system. We rave about it when a letter is a day late, or the postman gives our letters to the people next door—but we take for granted the hundreds of times it is not late and the days without end when the postman does not mix up our mail. Perhaps if we knew more about the so-called postal systems before our present one was installed we would always be more thankful for our present system. We are indebted to the *Bell Telephone News* for this sketch of that early "service":

At the outbreak of the Revolution, what is now the United States consisted only of thirteen colonies, fringing the Atlantic seaboard. Scarcely more than a score of years earlier a few companies of settlers had made their way over the mountains into the Ohio country. Under a succession of royal postmaster-generals, among the most notable of whom was Benjamin Franklin, post routes, of a sort, had been established and gradually extended. But even as late as 1784, when Washington had retired to Mount Vernon to live out his days, as he hoped, in retirement as a country gentleman, we find him writing to friends in Philadelphia and New York of their letters being a month or more on the road.

Thus, in February of that year, he complains to General Henry Knox:

> "The bad weather and the great care which the post riders take of themselves prevented your letters of the 3rd and 9th of last month from getting to my hands till the 10th of this."

On one occasion, a letter sent from Boston to Washington at Mount Vernon on March 21, 1797, did not reach its destination until the early part of the following June.

As a matter of fact, it was only within a year or two of Washington's birth that Virginia had a weekly mail from the north. A post route had been established between Virginia and New England in 1717, but it was not until a dozen years later that mails were carried over it as often as once a week.

In 1717 a letter could be carried from Boston to Williamsburg, Va., in four weeks in the summer and eight weeks in the winter—if all went well. At about this time the route was extended to Newport, Va., between which point and Philadelphia the round trip was made in twenty-four days.

Franklin was appointed postmaster of Philadelphia two years after Washington's birth, and, jointly with one William Hunter, became postmaster-general of the colonies, by appointment of the Crown, in 1753. With characteristic energy, he at once made a tour of inspection which included every post office in the country except Charleston, S. C., and inaugurated many improvements in the postal service. He marked the post roads between Boston and Philadelphia with milestones, some of which are still standing. He "speeded up" the service to such an extent that one admirer, commenting on its efficiency, wrote: "Answers to my letters (from Boston to Philadelphia) may now be obtained in three weeks which used to require six weeks."

Franklin was personally popular, but the postal service was not. Rates were high—under the Post Office Act of 1717, the charge for a letter was four pence for sixty miles and six pence for distances between 60 and 100 miles.

This led to an interesting form of getting around an unpopular law that was not altogether unlike certain more modern efforts aimed at the same general purpose. An early Act of Parliament had provided that all letters must be carried by the regular post riders of the Crown, *unless accompanied by merchandise,* in which event they might be carried by private messengers at any rate agreed upon between the latter and their employers.

There came into existence what amounted to "bootleg" postal routes. In 1773, one Hugh Finlay made an inspection of the colonial post offices and found, among other interesting things, that in one part of New England bundles of chips, straw, or old paper were used (and quite likely used over and over again) as the "merchandise" which technically brought illegally transported epistles within the letter of the law.

Random Facts

The Great Pyramid of Egypt is 480 feet high.

It takes approximately one mile of wire to make a full-sized window screen.

There are from 14 to 18 square feet of skin on the average human adult.

The human heart is in the center, not in the left side of the body.

A whale's skin varies in thickness from two inches to two feet.

It requires more than a century for a cedar tree to grow large enough to yield a 30-foot telephone pole.

Small-pox marks on the mummy of Rameses V indicate that this disease was known to the Egyptians of about 1,200 B. C.

Postage stamps were first used in this country in 1847. Five- and ten-cent stamps were the only kind issued for a time.

If you had lived in the 14th century you could have bought horses at 72 cents each, and oxen at $1.25.

Index Now Ready

An Index listing articles, illustrations and poems appearing in *The Bulletin* during 1936 has been prepared and copies will be sent free on request, Address: Supervisor of Publications, Room 905, Delaware and Hudson Bldg., Albany, N. Y.

1,600,000 CHILDREN ARE EDUCATED ANNUALLY BY THE RAILWAYS!

THE RAILROADS ARE NOT IN THE SCHOOL BUSINESS, BUT THE SCHOOL TAXES THEY PAY DO EDUCATE MORE THAN 1,600,000 CHILDREN EACH YEAR.

PROVIDING FOR THE EDUCATION OF UNCLE SAM'S FUTURE CITIZENS IS THE HAPPY PRIVILEGE OF ALL GOOD CITIZENS—AND THE RAILWAYS ARE PROUD TO BE GOOD CITIZENS.

ASSOCIATION OF AMERICAN RAILROADS

Clicks from the Rails

London-Paris Sleeper

service was recently inaugurated with the launching of three car ferries built for operation across the English Channel between Dover and Dunkerque. Each of the boats is 360 feet long and 63 feet wide, with track space for 12 sleeping cars or 40 freight cars, while a garage on the upper deck will accommodate 25 automobiles. Trains leave Victoria Station, London, at 10 P. M., arriving at Gare du Nord, Paris, 8:55 A. M. In the return direction they leave Paris at 9:50 P. M., reaching London at 8:30 A. M. Previously train passengers had to transfer from train to boat for the channel crossing.

Train Robbers

escaped with $16,000 in money and valuables after holding up the passengers on an Argentine train. Five bandits, armed with rifles and revolvers, climbed aboard as the train left a station and forced the passengers to hand over all their valuables. One passenger was carrying $12,000, a fact the robbers may have known beforehand. Despite prompt pursuit none of the five was apprehended.

Two Boys Were Saved

from drowning by a British railroad signalman who saw their raft capsize, throwing five into the water. As a train was due he could not leave his post, but he telephoned a nearby roundhouse and a light engine was sent with a rescue crew. Both lads were dragged from the water, artificial respiration being applied to revive one of them.

Railroad Diners

serve approximately 25,000,000 meals a year, enough to furnish every inhabitant of a city of nearly 23,000 population with three meals a day for the twelve months.

Siamese Twins

who boarded a Burlington train at St. Louis with only one ticket for St. Paul presented a puzzling problem for Conductor Kinning to ponder over. The twins could be considered as one or two persons, depending on how you look at the matter. Unable to reach a conclusion, he wired the general passenger agent for instructions, receiving this reply: "If unable to collect the extra fare, make no attempt to put one of them off the train."

The Super-Service

of the Railway Express Agency was recently praised by a motorist without a spare tire who had a "flat" several miles from the nearest town. While sitting on his running board, deciding whether to walk to town or "go in on the rim," an express truck driver stopped to offer assistance. Their conversation developed that the truck contained a new tire and tube he had ordered delivered at the next town.

Best-kept Station Contests

were turned into sources of revenue by the London North Eastern which ran excursion trains from four cities, stopping for 15 minutes at several of the most attractive depots. The practice of awarding cash prizes for the "best-kept" station has been an annual feature for some time. The public became so interested in the project that this year it was given an opportunity to inspect the floral displays at some of the stations.

A Locomotive Firebox

recently built in this country is 9 feet wide and 22 feet long, a total area of 198 square feet, which is larger than many living rooms in small homes.

A Boston Terrier,

lost while its master stopped at Malahat Mountain, British Columbia, was returned to its owner by Railway Express after having gone five days without food and battling a mountain eagle. After searching in vain for the lost dog, its master had sorrowfully gone home to Glendale, Cal. Five days after employes at Malahat noticed a screaming eagle fluttering nearby and investigated. They found the dog, its harness caught on a bush, fighting the eagle. Beating off the bird with towels, they rescued the dog. A few days later the owner was overjoyed to receive a "surprise package" from the Express Agency containing his dog.

Passengers Had to Push

when Chicago, Burlington & Quincy trains were about to stall on hills on rainy days in the late forties. Male passengers were required to stand on the car steps approaching the summit of a hill and if the locomotive stalled they had to hop off and push. Tickets issued by the Elizabethtown & Somerville, now part of the Jersey Central, also carried the provision: "The passenger to assist the conductor on the line of road whenever called upon."

Locomotive 999

which in 1893 set a world speed record for steam engines, recently pulled President Roosevelt's special train. When the switch engine assigned to handle the presidential special at the Great Lakes Exposition, Cleveland, could not move it, the 999, which had been standing on a nearby siding with steam up, was pressed into service. The 999 helped pull the train for several miles before both were replaced by a road engine in the local yards.

The New Year

IT lies before us, like an uncut page,
Or luring track of an uncharted sea;
Or beckons as a continent untrod,
For good or ill, experiences to be.
It calls to effort like a peak not won,
Or field of virgin snow in early sun.
Where lies its destiny? None knows but God.

—KIND WORDS.